Abstract

Electromechanical brake with zero backlash actuation

The invention relates to an electromechanical brake (10), especially for vehicles, comprising an electrical actuator generating an actuation force and acting upon at least one friction member (16) in order to press said member to elicit a frictional force against a rotational component (14), which is to be braked, of the brake. The invention also comprises a self-boosting device arranged between the friction member (16) and the electrical actuator, said device serving to self-boost the actuation force generated by the electrical actuator. The invention further comprises at least one wedge (18) with an angle of inclination $\alpha$ that is supported on a corresponding counter bearing (22). In order to improve the adjustability of said brake (10), the electrical actuator has two drive mechanisms (34, 34') which act upon the wedge (18) and can work against each other to generate the actuation force with the purpose of zero backlash actuation of the brake (10). In the range of low actuation forces, i.e. in a range $\tan \alpha \cong \mu$, where $\mu$ is the friction coefficient between the friction member (16) and the component (14) to be braked, the two drive mechanisms (34,34') work against each other to generate the actuation force.

Fig. 2